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PARTICIPANT FOLLOWUP STUDY--THE PERT LECTURES, A CASE STUDY IN KNOWLEDGE DISSEMINATION, AND UTILIZATION, VOLUME 2.

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A FOLLOWUP STUDY WAS CONDUCTED OF THE PERT (PROGRAM EVALUATION AND REVIEW TECHNIQUE) LECTURES, CONDUCTED IN 1965 TO INFORM THE EDUCATIONAL COMMUNITY OF PERT AND TO ENCOURAGE ITS USE. QUESTIONNAIRES WERE SENT TO 397 LECTURE PARTICIPANTS TO DETERMINE THE DEGREE OF UTILIZATION OF THE INFORMATION PRESENTED AND TO SEEK INFORMATION ON THE DISSEMINATION PROCESS IN EDUCATION. THE QUESTIONNAIRE WAS SPECIFICALLY DESIGNED TO PROVIDE INFORMATION ON (1) THE NATURE OF THE AUDIENCE, (2) PLANS FOR UTILIZATION, (3) QUALITY OF THE MESSAGE, AND (4) PREFERENCES FOR DISSEMINATION ACTIVITIES. QUESTIONNAIRES WERE RETURNED BY 294 RESPONDENTS. SEVERAL CONCLUSIONS WERE DEVELOPED, ONE OF WHICH WAS THAT THE AUDIENCE CONSISTED OF PERSONS WHO ATTENDED OUT OF CURIOSITY AND WHOSE PROFESSIONAL INTERESTS DID NOT RESIDE EXCLUSIVELY IN EDUCATIONAL RESEARCH AND DEVELOPMENT. SUGGESTED WERE RECOMMENDATIONS THAT THE BACKGROUND OF FUTURE PARTICIPANTS BE ASSESSED AND THAT MORE WORKSHOP ACTIVITIES BE INCLUDED IN FUTURE PROGRAMS. (REFER TO ED 003 379 FOR ANOTHER REPORT ON THE PERT LECTURES.) (RS)

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VOLUME II: PARTICIPANT FOLLOW-UP STUDY

August 1966

U.S. DEPARTMENT OF
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VOLUME II: PARTICIPANT FOLLOW-UP STUDY

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Desmond L. Cook

August 1966

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CHAPTER I

Background and Purpose

Since March 1, 1964, the author has directed a U. S. Office of Education supported developmental project (1) the purpose of which was to study the applicability of management information systems developed for the planning and controlling of research and development activities in the military-industry complex to the field of education. The particular management system involved was the Program Evaluation and Review Technique, or PERT by its more familiar acronym.

One major objective of this project was to disseminate to other persons in education, particularly to those persons involved in research and development activities, information about PERT and its feasibility for educational research and development projects. To accomplish this objective, a series of lectures was presented at twelve major universities located throughout the United States. Such factors as geographical location, population density, and recognition as high producers of research and development activities were among the criteria used in selecting the universities. It was anticipated that the several universities would function in a manner such that the lectures would serve as "regional dissemination lectures."

Each lecture consisted of a two-day presentation of materials covering the general concepts and principles of the PERT technique, a practical exercise, a summary of selected educational applications, suggested implementation procedures, and an introduction to PERT/COST. The general mode of presentation was by the lecture technique using overhead visuals, movie film, and slides as needed.

The practical exercise followed the first session dealing with the general principles of PERT.

The lectures were held during March and April of 1965 and involved two professional persons on a full-time basis. Approximately $2,800 was spend for travel expenses and $500 for materials and related expenses. Evaluations were secured from as many persons as possible attending each lecture in order to secure feedback for improvement of presentation and to determine potential utilization. The general nature of immediate evaluation, however, was focused more upon the clarity and balance of the lecture presentation and less on the potential usefulness of the information presented to the participants. A report describing the procedures in setting up the lectures and their evaluation is contained in The PERT Lectures: A Case Study in Knowledge Dissemination and Utilization, Volume I: Initial Lectures.

In view of the time and resources spent on this dissemination activity, it is highly desirable to conduct some form of follow-up study to determine if and how the lecture participants utilized the information presented in the planning and controlling of their research and development activities.

The conduct of such a study could be justified solely for the reason cited above. The opportunity provided by such a situation to contribute to understanding the process of disseminating educational information to bring about educational change was recognized and provides a secondary form of justification for doing the study. A great deal of interest exists at the present time in studying the "change process" in education. Theoretical papers are being written about the educational change process as evidenced by the recent statement of Clark and Guba (3). Direct study of how research

knowledge is utilized is being undertaken by groups such as the American Educational Research Association and the Center for Research on the Utilization of Scientific Knowledge at The University of Michigan. A recent conference dealing with possible strategies for bringing about educational change was held in Washington under the direction of The Ohio State University.

Even with the above efforts, what is known about the techniques and processes for bringing about change in the field of education is relatively little. It would seem appropriate, therefore, that whenever an opportunity emerges to study further the process of bringing about educational change, it should be capitalized upon so that existing theories and hypotheses about change can be validated or rejected as well as to provide data for other researchers in the field. Consequently, a decision was made not only to conduct a follow-up study of those persons attending the lectures to see what, if any, subsequent utilization of knowledge about the technique was made but also to use the opportunity to study the dissemination process. The actual implementation of this idea required that the original project be extended beyond its scheduled termination date of August 31, 1965, in order to provide time and resources for the data collection and interpretation, a no-cost extension until December 31, 1965, was granted by the funding agency so that the follow-up study could be made.

The specific purposes of this report are to present (1) the results of the follow-up survey of dissemination lectures participants to see what utilization was actually made of the information presented and (2) further information about the role of dissemination in bringing about educational change. With regard to the latter

purpose, the primary concern was with the technical issues of the knowledge utilization process as distinguished from knowledge utilization as a system as described by Havelock and Benne (4).

CHAPTER II

Methodology

This chapter describes the general method and procedures used to accomplish the follow-up study objectives. Specific activities with regard to developing a data collection instrument, selection of the respondent sample, and considerations involved in processing the data are presented.

Instrument Development

In view of the wide geographical location of lecture participants, a mail survey using a structured questionnaire was decided upon as the most feasible way to collect the data desired. The initial procedure was to identify and/or to list the information to be secured from the participants in order to accomplish the purposes of the study. This initial list was then reviewed by Dr. Virgil Blanke, Head of the Division of Development, and Dr. Egon Guba, Assistant Director for Research, both of the School of Education at The Ohio State University and individuals having a high interest in the problems and processes associated with the dissemination of information in order to bring about educational change. The revised list was then utilized to develop a set of questions which were largely in structured form except where it was felt desirable or necessary to leave the responses unstructured. The preliminary questions were then reviewed by the same persons. Additional items were added as necessary and/or revisions in preliminary items made. Specific

considerations centering on individual questionnaire items are discussed below. A copy of the final questionnaire appears in Appendix A. An appropriate cover letter was prepared indicating the general purpose of the follow-up study and is included as Appendix B.

Participant Background. The dissemination lectures were primarily focused upon an audience composed of persons engaged in educational research and development activities. It seemed important, therefore, to determine the composition of the audience which actually attended the lectures. Several census-type items were developed which asked for information regarding the participants' highest degree (item 1), the position held at the time of attending the lectures (item 2), the general type of institution or agency with which the participant was connected at the time of attending the lectures (item 3), and the principal function of the unit to which the individual was attached (item 4). To secure some idea about the research activities of participants, two questions asked for a description of the responsibility the individual had for the planning and execution of research projects at the time of attending the lectures (item 5) as well as for the types of projects (in terms of source of funding) for which responsibility was held (item 6). It was felt that this series of six questions would provide sufficient information to judge whether or not the intended audience had been reached.

Awareness of Lecture Series. Considerable effort had been made by the PERT project staff to disseminate the dates and locations of each of the twelve lectures. A special announcement was prepared and distributed at the 1965 American Educational Research

Association meeting with a similar announcement being sent to recognized professional journals and/or newsletters (e.g., Phi Delta Kappan, American Psychologist, etc.). In addition, The Ohio State University Public Relations Office distributed press releases about lectures to news media in the regional areas presumably covered by each lecture. Further, each of the twelve cooperating institutions was asked to distribute information about the lecture in their area by means of local news media, special announcements, and related activities. One item (item 7) was constructed to secure some idea on how the respondent became aware of the dissemination lecture. The results from this item would provide a check on the effectiveness of the several methods of announcing the lectures as well as on how individuals were made aware of the lectures themselves.

Participant Attendance. It is quite common when presentations similar to the lecture series are announced, individuals attend voluntarily because of personal interest or attend as designated representatives of an institution. Knowing the conditions under which individuals actually do attend such lectures would have some value in the planning of similar lectures in the future. For example, if the majority of persons attend as designated representatives, then efforts to publicize the lectures could be directed toward institutions rather than to individuals. It was felt that information regarding the conditions under which the participant actually attended the lectures would be useful. One question (item 9) dealt with determining whether or not the participant attended voluntarily or as a designated representative.

Another dimension of attendance would be the participant's degree of participation as reflected in attendance at all of the sessions or if attendance was only on a part-time basis. One item (item 9) asked the respondent to describe his attendance at the two-day lecture period.

Lecture Validity. The impact of an informational message is dependent upon both the quality of the message as well as the way in which the message is transmitted to the potential user. The information presented must not only be relevant but also accurate and up-to-date. The PERT project staff spent considerable time in assembling the necessary information and organizing it into what was thought to be a useful format for dissemination to the lecture participants. It was brought to the attention of the PERT staff during the course of the lectures that many of the participants had some prior knowledge and experience with PERT before attending the actual lectures. It was decided to draw upon the knowledge and experience possessed by these persons to arrive at some assessment of the quality of information presented. Accordingly, one question (item 10) asked if the respondent did have prior experience with PERT. If the participant responded positively, he was directed to several questions which asked for a description of his knowledge (item 11) and experience (item 12), his judgment about the coverage and explanations of PERT concepts and principles (item 13), an evaluation of the accuracy and up-to-dateness of the lecture material (item 14), and to indicate if the lecture was of sufficient quality that he would use it to orient fellow staff members (item 15). It was anticipated that responses to this series of questions would be of help in assessing the quality of the message presented to the participants.

Utilization of Information. As noted earlier, the basic purpose of the dissemination lectures was to present information about a new research management tool. There was the anticipation that knowledge of the technique would result in some use subsequent to the lectures. Assessing the nature and degree of any utilization was a primary goal of the follow-up study. Subsequent utilization of information once presented to a person is dependent in part upon any plans a participant may have had for using the lecture information and thus attending the lectures. One question (item 16), therefore, inquired about any prior plans the respondent had for using the material. To determine actual subsequent utilization, an item (item 17) asked whether or not PERT had been actually implemented on a new or on-going project. If implementation had taken place, one succeeding item asked the participant to describe the project(s) on which the technique had been implemented (item 18) and another item sought information about degree of implementation (item 19).

Althouth information is presented to a person, it would probably not be used for a variety of reasons. It would be important in judging the value of the dissemination lectures to have some idea of the reasons for not using the information. One item (item 20), therefore, asked participants to indicate reasons for not implementing the technique.

Information presented to one individual may not be directly used by that person but may be disseminated to others for possible use. Several requests were made of the PERT project staff for additional information and material which could be used to make such a presentation to other individuals. In some cases, participants

were sent to the lectures under the specific condition that some type of report about the technique would be made to the funding source. To determine the extent of this utilization one question (item 21) asked about the use of information presented in the lectures to make presentations of an informational nature to other groups.

A message can be evaluated in terms of subsequent use of the information presented. It can also be evaluated in terms of its stimulation of the recipient to seek further information. To study this possible impact, one question (item 22) asked if the participant had been motivated to attend subsequent presentations on PERT. A second item (item 23) asked for identification of any such presentations attended. A third question (item 24) asked if PERT consultants had been employed or utilized since attending the dissemination lectures. A fourth question (item 25) asked the participant to list any offices or agencies contacted for further information.

Dissemination Technique. The contents of a message may be of high quality but an ineffective or inappropriate means of transmission might be utilized to present it. To help assess the value of the lecture for the dissemination technique, at least as used in the PERT project, a question (item 26) was developed which asked participants to place in rank order their judgment of the effectiveness of seven possible means of transmission as an initial means of disseminating information about a new technique such as PERT.

One frequently used dissemination technique is the publication of a monograph, paper, or similar report. In addition to the lectures, the PERT project staff prepared a manuscript for a monograph to be published and distributed by the U. S. Office of Education in order to

disseminate information about PERT to the educational community. One item (item 27) was constructed to measure the degree of effort that a participant would expend to secure the monograph for additional information. Responses to such a question might shed some light on the value of published material as a dissemination technique.

The final form of the questionnaire was submitted to the U. S. Office of Education for review and Bureau of Budget approval prior to distribution to the respondents. Approximately six weeks were consumed for this review and approval. The normal procedure of a trial administration of the questionnaire was eliminated for several reasons. First, a desire to distribute the questionnaire as quickly as possible and to conduct an analysis of responses before the project terminal date. Second, the delay caused by the review and approval. Third, there was no comparable group of respondents to whom the questionnaire could be administered.

The Respondent Sample

Although not included as part of the original project objective, the idea of a possible follow-up of dissemination lecture participants occurred to the PERT project staff prior to conducting the actual dissemination lectures. The administrative memorandum sent to the coordinator at each cooperating institution, therefore, asked that some form of registration of attendance be maintained. These registration lists plus the lecture evaluation sheets completed by each participant provided the nucleus of names and addresses of persons to whom the questionnaire was distributed. The evaluation sheets completed at the end of each lecture were checked against the registration lists to make sure that duplicate names were avoided and

possible omitted names on the registration lists would be added to the total list for each lecture location. Using these two sources, a total of 397 persons were identified as having attended the several lectures. Code numbers were assigned to each person so that it would be unnecessary to ask for a participant's name on the questionnaire.

Each participant was sent a copy of the questionnaire along with a cover letter explaining the purpose of the follow-up study and a self-addressed stamped envelope for return of the questionnaire. Several questionnaires were returned with an indication that there was insufficient address information. In such cases, the assistance of the original coordinator was sought in securing a more complete address for such participants. The initial mailing was done during the period from November 15 to December 1, 1965, or approximately six months after the initial lecture period.

Questionnaire Processing

In view of the number of questionnaires distributed and the anticipation that there might be a sizable return from the respondents plus the need to interrelate the responses from several questions with each other, arrangements were made to process the data using a questionnaire analysis program available at The Ohio State University Computing Center. Most of the items were so structured that coding for machine tabulation was easily handled. Some of the less structured items required that the responses be coded based in part on the way the respondents actually answered the question as well as upon *a priori* answers. This was particularly true for items 2, 18, 23, and 25.

For item 2, the coding procedure developed by Bargar for the *National Register of Educational Researchers* (2) was utilized

for the respondent's position. For this same item, the state the individual was from at the time of the lecture was coded so that some idea could be obtained as to the geographical region covered by each lecture.

To develop coding systems for items 18, 23, and 25, a random sample of twenty questionnaires was reviewed to note how the respondents answered the questions. For item 18, there appeared to be no systematic description of the nature of projects so the coding system indicated only the total number of projects to which the technique had been applied. For item 23, many respondents took the opportunity to indicate that they would have liked to have attended a subsequent presentation but couldn't find any available or there were no resources available to attend one if they knew about it. The coding system developed indicated not only that they did not attend any presentation but gave a summary of the reasons for not attending. An analysis of the responses to item 25 indicated a wide variety of agencies contacted but often without sufficient description to classify them so only the total number of agencies contacted was recorded.

Some items called for only <u>one</u> response from the respondent but many persons chose to indicate more than one response. For example, in responding to item 8 many persons checked both a designated representative as well as volunteer attendee. Persons responding in this manner were coded as designated representatives on the assumption that they probably accepted the assignment because of a personal interest or possibly even volunteered. A similar condition was encountered with regard to item 4 where the individual indicated the principal function of the agency to which he was attached. If

multiple responses appeared for this item, referral was made back to the individual's title and department in order to ascertain the primary function. An analysis of the responses to question 27 revealed that multiple responses existed where only one was desired. This situation may have occurred because the plural conditions were used in the item instead of the singular condition and was not detected prior to duplication and mailing. Since the purpose of the question was to determine the amount of effort which would be expended to secure the monograph, the item was coded to indicate the highest level of effort. That is, purchasi ng a copy was considered as representing more effort than reading the book if it was sent gratis.

The responses for each participant were punched into IBM cards and processed on the IBM 7094 computer using the questionnaire analysis program noted earlier. Several different sorts were made according to the general question to be answered. For example, how did the responses to each item compare for each of the twelve lecture locations? Frequency counts and percentages were provided as computer output for each item under each general question. The results presented in Chapter 3 have been selected from all the possible data generated from the above computer processing of the data so as to reflect the primary objectives of the follow-up study.

CHAPTER III

Analysis of Participants' Responses

This chapter presents an analysis of the participants' responses to the questionnaire. In general, the responses of the total group to a single item are presented initially. Breakdowns by selected participant characteristics which appear to have relevance to the general item under discussion are then presented.

The data are presented in both narrative and tabular form. The tables in the text show the frequency of response plus per cent of total responses where appropriate. Frequencies resulting in a percentage of less than 1 per cent have been omitted from the tables for purposes of easy reading. Hence, total per cent is smaller than the total number of responses.

The results presented below have been organized according to the main types of information desired as outlined in the questionnaire development section in Chapter II so as to provide emphasis to the principal purposes of the study.

Response to Questionnaire

As noted in the procedures section, 397 questionnaires were mailed during the last part of November, 1965, to the available list of participants. Of this number, 294 questionnaires or 74 per cent were returned by the scheduled termination date of the project, which was December 31, 1965. Twelve completed questionnaires returned subsequent to this date were not included as part of the analysis.

Two questionnaires were returned by persons saying they had registered for the lectures but did not actually attend. Three questionnaires were returned because the person could not be located. One person responded by written letter rather than by completing the questionnaire. Of the original group, 312 participants or 78.6 per cent of the total responded in some form to the questionnaire.

Table 1 shows the number and per cent of questionnaires sent and returned by lecture location based on the final group of 294 questionnaires used in the response analysis. Each lecture location

Table 1 - Questionnaire Return by Lecture Location

Location	Sent	Returned	Per Cent
University of California	29	20	69
University of Southern California	23	16	70
Florida State University	24	19	79
Syracuse University	59	44	75
Columbia University	19	15	79
Washington University (St. Louis)	20	10	50
University of Iowa	67	54	81
University of Minnesota	7	7	100
University of Wisconsin	61	44	72
University of Pittsburgh	46	32	70
Michigan State University	26	22	85
Indiana University	16	11	69
Totals	397	294	74

followed the general pattern of return except for Washington University (St. Louis) where only 50 per cent of the respondents returned the questionnaire and University of Minnesota which had a 100 per cent return.

Regional Coverage

One goal of the lectures was to disseminate information about PERT to as large an audience as possible. Each lecture location

was selected with the idea that it would serve as a central location for a designated regional area. For example, Florida State University was selected to serve as a center for the southeastern states adjacent to Florida. Each center coordinator was asked to send notices about the lecture to the states designated for his regional center.

One measure of the degree of accomplishment of this goal would be the number of persons attending a lecture from states outside of the state in which the lecture was held. A tabulation was made of the respondent's home state as shown in Item 2 of the questionnaire. Table 2 shows for each lecture location the number and per cent of persons attending that lecture from within and outside the state.

Inspection of Table 2 reveals that participants came generally from the state in which the lecture was located, with the median per cent of home-state participants being 95 per cent. Some between institutional differences do appear. Columbia University and Washington University appeared to have functioned as regional centers more than did the other locations. The Michigan State University location appears to have served such a purpose but the data reflect the fact that many participants attending that lecture were actually at Michigan State to attend a research meeting sponsored by another group. These participants were encouraged to attend the PERT lecture because it was available on Monday and their conference did not start until Tuesday.

It would appear from these results that the original goal of having the various host institutions serve as a regional center was not generally accomplished. For only two of the twelve lecture locations might it be said that they functioned as regional centers in the sense hoped for by the project staff.

Table 2 - Regional Representation at Lecture Locations

Lecture Location	States Represented	Number	Per Cent
University of California	California	20	100
University of Southern California	California	16	100
Florida State University	Florida	18	95
	Georgia	1	5
Syracuse University	New York	41	93.2
	New Jersey	2	4.5
	Connecticut	1	2.3
Columbia University	New York	12	80
	Delaware	1	6.7
	New Jersey	1	6.7
	Pennsylvania	1	6.7
Washington University (St. Louis)	Missouri	5	50
	Illinois	4	40
	Arkansas	1	10
University of Iowa	Iowa	53	98.1
	Minnesota	1	1.9
University of Minnesota	Minnesota	7	100
University of Wisconsin	Wisconsin	42	95.5
	Pennsylvania	1	2.3
	Minnesota	1	2.3
University of Pittsburgh	Pennsylvania	32	100
Michigan State University	Michigan	15	68.2
	New Jersey	2	9.1
	California	1	4.5
	Minnesota	1	4.5
	Nebraska	1	4.5
	Pennsylvania	1	4.5
	Wisconsin	1	4.5
Indiana University	Indiana	11	90.9
	Colorado	1	9.1

Nature of Audience

As noted above, the principal audience to which the lectures were addressed was persons engaged in and having responsibility for educational research and development activities. No restrictions, however, were put on attendance and anyone interested in knowing about PERT was free to attend. This section of the questionnaire presents data which assists in determining whether or not the intended audience was actually reached. Specific audience characteristics summarized relate to degree held, professional title, location and agency function, personal responsibility for research, and project activity.

Earned Degree. One measure of research background would be the highest earned academic degree held by the participant. Responses to the item asking for this information are presented as Table 3.

Table 3 - Participants' Degrees as Compared to National Register of Researchers

Degree*	Lecture Participants		National Register	
	f	per cent	f	per cent
Doctorate	133	45	3,216	82.3
Master's	117	40	626	16.0
Bachelor's	32	11	35	.9
No Degree	10	3	-	-
No Response	2	-	-	-
Totals	294	100	3,909	100

*One Professional Degree Omitted

Inspection shows that 45 per cent of the participants held a doctorate degree, 40 per cent the Master's degree, and approximately

15 per cent the Bachelor's degree or less. The data were compared to similar information obtainable from the National Register of Educational Researchers (2) to note what similarity existed between the lecture participants and persons identified as educational researchers. While the doctorate degree was held by less than half of the lecture participants, 82 per cent of the researcher register group possessed a similar degree. On the basis of this comparison, it would appear that the lectures did not reach the intended audience if earned degree is a criterion for identification as a researcher.

Participant Positions. Each participant was requested to supply the title of his professional position held at the time of lecture attendance. It was thought that analysis of the several titles might be helpful in determining the composition of the audience.

The various titles were coded using the system developed by Bargar for the register of educational researchers (2). The categorization of titles and accompanying frequencies and percentages for the major groupings and titles within groups are presented as Table 4.

Approximately 40 per cent of the total participants held major staff positions with 49 per cent of this sub-group consisting of persons in the professorial position. The next largest category was Executive with about 33 per cent of the total group being so classified. Within this group, Directors and Superintendents total nearly half of the respondents. The major categories of Minor Staff and Assistant Executive constituted 17 per cent and 10 per cent respectively of the total group.

Table 4 - Positions Held by Participants

Category and Title	Frequency	Per Cent
Executive	(96)	(32.6)
Director	32	33.2
Superintendent	15	15.6
Supervisor	9	9.4
Coordinator	8	8.3
Principal	7	7.3
Manager	6	6.2
Chairman	6	6.2
Chief (Division of ---)	5	5.2
Dean	4	4.2
Secretary, Executive Secretary	2	2.1
Head, Executive Head	2	2.1
Assistant Executive	(29)	(9.8)
Executive Assistant	7	24.1
Assistant Superintendent	6	20.7
Associate or Assistant Dean	4	13.8
Associate or Assistant Director	4	13.8
Vice President	2	6.9
Assistant Principal	2	6.9
Deputy Registrar	2	6.9
Assistant, Associate, or Deputy Commissioner	1	3.4
Assistant Coordinator	1	3.4
Major Staff	(117)	(39.8)
Assistant Professor	23	19.7
Professor	19	16.2
Associate Professor	15	12.8
Instructor	10	8.5
Research Associate	10	8.5
Analyst	7	5.9
School Psychologist, Guidance Counselor	7	5.9
Specialist	7	5.9
Consultant/Advisor	5	4.3
Research Scientist or Scientist - All Fields	5	4.3
Statistician - Programmer	4	3.4
Teacher	3	2.6
Associate	2	1.7
Minor Staff	(50)	(17.0)
Research Assistant	17	34
Graduate Student	14	28
Fellow	8	16
Graduate Assistant	6	12
Intern	2	4
Teaching Assistant	2	4
Assistant Instructor	1	2

Examination of position titles, disregarding major categories, reveals that the largest number of participants held professorial positions (N = 67) with the next largest group holding positions of Director and Superintendent. Relatively few persons indicated a title directly associated with research activity.

The results of this analysis do not contribute substantially to determining the research background of the group. They do indicate that a large proportion of the actual audience did come from colleges and universities, a condition reinforced by the findings in the next section presented below.

Institution-Function Relationship. The two items asking about institutional association and principal function were tabulated and are presented as Table 5.

Table 5 - Participant Classification by Institutional Association and Principal Function

Institution \ Function	Teaching	Research	Administration	Service	Response	f	Per Cent
College or University	84	56	28	21	2	191	65
Private or Public School System	11	7	28	8	-	54	18
State Agency	-	16	2	11	-	29	18
Other[1]	4	8	5	2	-	19	6
No Response	-	-	-	-	1	1	-
Frequency	99	87	63	42	3	294	
Per Cent	34	30	21	14	1		100

[1]Other includes: Private Foundation (2), Federal Agencies, Business and Industry (6), and Military (1).

It can be observed from the marginal totals that over two-thirds of the participants came from colleges or universities, about one out of five came from public school systems, and one out of 10 attended from state governmental agencies (e.g., state educational agencies). The remaining participants were associated with private foundations, federal agencies, business and industry, and the military.

The marginal totals for principal function of the agencies with which the participants were associated show that approximately one-third was involved in teaching, less than one-third in research, and smaller percentages in administration and service functions.

A further analysis of the agency function relationship by lecture location revealed some interesting observation. Five centers (California, Southern California, Syracuse, Wisconsin, and Indiana) had approximately 50 per cent indicating teaching while five other locations (Florida State, Columbia, Washington University, Pittsburgh, and Michigan State) had more participants indicating research than teaching as the principal function. On the other hand, two centers (University of Iowa, University of Minnesota) had more participants indicating administration as their principal function than did the other ten centers.

Explanation of this observation probably centers around a perception of the intended audience as viewed by individual centers. For example, the University of Iowa Center was coordinated by a person whose primary affiliation was with educational administration. Consequently, the lecture announcement was distributed through local channels primarily to persons engaged in school administration. Additional evidence for this explanation is provided by the fact that about 65 per cent of these participants had only the Master's degree.

This observation reinforces a relationship the project staff observed during the course of the lectures. At each center, the size and composition of the audience appeared to be dependent upon the particular interest and background of the coordinator assigned by the institution. If a coordinator was engaged primarily in research, the audience would likely have a large proportion of researchers. If an administrative specialist, the audience tended to be composed of administrators. It would appear that from these findings and observations that special attention must be given not only to specifying clearly the audience but also to the selection of a coordinator if an intended audience is to be reached in dissemination activities as represented by the PERT lectures.

In general, the audience attending the lectures consisted of college and university personnel engaged primarily in teaching or research. The fact that the teaching showed a higher percentage than research can probably be best explained by noting that the question asked about the principal function of the agency and not about the individual's role within the agency. Hence, many persons associated with a college or university, even though doing research, might indicate that their principal function was teaching. Perhaps more useful information would have been obtained had the question asked directly about the individual's activities and role within the agency.

Research Responsibility

As noted, information regarding the participant's responsibility for research activities was obtained to help determine if the intended audience was reached. Each participant was asked to describe his

responsibility for the planning and execution of research projects at the time of attending the lectures. Table 6 summarizes the nature of the responsibilities. Inspection of this table shows that about 40 per cent of the participants had no personal responsibility for

Table 6 - Responsibility for Research Project Planning and Execution

Nature of Responsibility	frequency	Per Cent
No personal responsibility	120	40.8
Personal responsibility for one or more projects	61	20.7
Administrative responsibility for office directing research	44	15.0
Project management responsibility under principal investigator	38	12.9
Other	29	9.9
No response	2	*
Total	294	100

project research while about half of the participants did have some form of responsibility. Ten per cent indicated some type of responsibility other than those provided in the item alternatives. An analysis of this latter group revealed that the primary responsibility was for a personal activity, such as a doctoral dissertation. If research responsibility is a useful criterion of research background and interest, these data tend to show that the desired audience was reached since about 6 of 10 participants had some responsibility for research.

Project Activity. In addition to the nature of responsibility, participants were asked to indicate the source of funding of projects for which they had responsibility. Responses are shown in Table 7.

In responding to the item, participants were provided an opportunity to indicate more than one source so that Table 7 should be

Table 7 - Source of Funds for Participants' Projects

Source of Funds	Frequency	Per Cent
Federal funds	84	28.6
Local funds	53	18.0
Non-funded	53	18.0
State funds	40	13.6
Other	32	10.2
Total	262	100.0

read that 28.6 per cent of the total projects reported received federal support, 18 per cent received local funds, and so on. Responsibility for federally funded projects was indicated by approximately 3 out of 10 respondents with other sources of funding showing smaller percentages. For those persons marking "other," the primary source of funding was from a private foundation.

An analysis of the responses for research responsibility and project type was made to see if any relationship existed between these two items. Table 8 presents the results of this analysis. Respondents having administrative responsibility for research projects were about equal in total number of projects to those having personal responsibility. Within project type, federally funded projects were the most frequent type of project activity for which there was administrative responsibility followed by locally funded, state funded, and non-funded projects in that order. Within the personal responsibility responses, the pattern was federal projects followed by non-funded, local, and state projects. Responsibility for project management under the direction of a principal investigator indicates also that a federally funded project was the type most likely to be involved with other

Table 8 - Relationship Between Responsibility and Project Type

Nature of Responsibility	Project Fund Source					Total	
	Federal	Local	None	State	Other	Frequency	Per Cent
No personal responsibility	2	2	4	1	7	16	6.1
Personal responsibility for one or more projects	24	17	19	15	5	80	30.5
Administrative responsibility for office directing research	25	18	11	17	10	81	30.9
Project management responsibility	24	9	6	4	6	49	20.7
Other	9	7	13	3	4	36	13.7
Total Frequency	84	53	53	40	32	262	
Total Per Cent	28.6	18.0	18.0	13.6	10.2		100

project types being less frequently reported. From these data, the most frequent type of responsibility was related to a federally funded project which was probably of a research nature.

Summary. In answer to the question of whether or not the intended audience was reached, a summarization of the data presented in this section of the report would tend to indicate that a larger proportion of non-research personnel than research persons attended the lectures. Among the non-research personnel, a large portion consisted of persons engaged in administrative activities in support of or related to research but not actively engaged in research. The management problems associated with their position probably caused them to attend the lectures in order to evaluate PERT as a possible useful tool. The lecture series therefore did disseminate information to an audience composed of personnel for which it was basically intended--namely, persons involved directly or indirectly in research and development activities.

Participant Awareness of Lectures and Attendance

Awareness. A reasonable premise would be that the composition of the audience would depend to a great extent upon how potential participants became aware of the lecture series. The several means of calling attention of the educational community to the lecture series were described earlier in the procedures section. Persons attending the lecture series were asked to indicate how they did become aware of them by checking one or more of the several methods used by the project to create awareness. The results for this item are presented in Table 9. The most frequently reported source of awareness was

Table 9 - Source of Awareness About Lecture Series

Source	Frequency	Per Cent
Conversation or note from colleague	154	52.4
Professional Journal or newsletter	38	12.9
1965 AERA Announcement	27	9.2
Local news media	18	6.1
Other	75	25.5

information received either in writing or orally from a colleague. It is quite likely this occurred because the information about the lectures was distributed by the local coordinator to one person who, in turn, passed it on to others. Responses for the second most frequently given source of "other" were examined and found to consist primarily of reference to an announcement distributed by the local coordinator. These responses should probably be combined with the conversation or note from a colleague. Efforts to develop awareness by means of a printed brochure distributed at the 1965 A.E.R.A. meeting apparently only reached a limited audience. Brief spot announcements in the form of a news item for inclusion in professional newsletters appeared to be an even more effective technique in that a larger audience was reached by this means than by more formal announcements. From these results, it would appear that potential participants became aware of the lectures of this type more by <u>informal</u> than by <u>formal</u> means of calling such lectures to their attention. This finding has possible implications for other dissemination activities in that emphasis might be given to informal rather than to formal means of calling the educational community's attention to the proposed

topic or material to be disseminated. It also emphasizes the value of including local personnel in the dissemination announcement as opposed to having the announcement come only from a centralized location.

Attendance. After the participant was informed about the lecture, under what condition did he attend the lecture? That is, was he sent to the lecture or did he attend on a volunteer basis? Once at the lecture, was he able to attend all sessions? One item on the questionnaire dealt with the former question while another item sought information about the subsequent attendance. Responses to these two were tabulated together to see if volunteer or designated representative attendance was related to the period of attendance at the lecture. Table 10 presents the results of this analysis. Volunteer

Table 10 - Attendance at Lectures by Volunteers and Designated Representatives

Attendance Condition	Lecture Attendance: Both days f	%	First day f	%	Second day f	%	Part of day f	%	Total* f	%
Designated Representative	65	77	14	17	3	4	3	4	85	30
Volunteer Attendance	120	60	42	21	9	5	27	14	198	70
Total	185	65	56	20	12	4	30	10	283	100

*11 persons responding "other" for either item are not included in this table.

attendees outnumbered designated representatives by over two to one. As for attendance, about 65 per cent of both groups attended both days. The general pattern of attendance was the same for both groups but with more designated representatives attending both days of lecture

than did volunteers. The latter group did, however, have a larger proportion attending only part of any one day.

Summary. Within the audience which did attend the lectures, the results presented indicate that the typical participant was likely to be a volunteer attendee, informed about the lectures informally by a colleague, and remaining the full two days. If sent as a designated representative, the participant would more likely stay the full days possibly to meet an obligation to his sponsoring agency.

Quality of Message

Assuming an intended audience is present, any potential utilization of the message presented may be limited because the quality of the information being disseminated is not adequate. If the information is not accurate and timely, the chances of subsequent utilization are thereby reduced. Several questions were asked to secure information about the quality of the lecture message. This section presents the results from the several questions relating to lecture quality.

Participants were first asked to indicate whether or not they had any knowledge about and experience with PERT prior to attending the lectures. Of the total number of participants, 130 or 44 per cent indicated that they had known about PERT while 163 or 55 per cent indicated that they had no prior knowledge. Responses to the several items relating to the quality of the lectures were analyzed only using the experienced group since they would be most likely to be able to judge the quality of the information presented.

The degree of knowledge and practical experience possessed by participants with prior PERT knowledge is shown in Table 11. It would

Table 11 - Participant Prior PERT Knowledge and Experience

Knowledge	Frequency	Per Cent	Practical Experience	Frequency	Per Cent
Little	66	50.8	None	78	60
Some	55	42.3	Little	27	20.8
Much	9	6.9	Some	20	15.4
			Much	5	3.8
Total	130	100	Total	130	100

appear from Table 11 that the experienced group did not possess extensive knowledge of the technique. What they did know was limited to knowledge and not to practical experience since approximately 81 per cent indicated they had no or little practical experience with PERT. In view of experienced groups' responses about prior knowledge and experience, one would have to question the validity of their judgments about the message presented.

Coverage and Explanation. Experienced participants' judgments regarding coverage and explanation of basic PERT concepts and principles in the lectures are presented in Table 12. Approximately 75 per cent

Table 12 - Judgment About Coverage and Explanation of PERT Concepts and Principles

Judgments	Frequency	Per Cent
Not adequately covered or explained	3	2.3
Adequately covered but not sufficiently explained	17	13.1
Adequately covered and explained	98	75.4
Not able to judge	11	8.5
Total	129	99.3

of the experienced group indicated that the basic concepts and principles of PERT were adequately covered and explained in the lecture.

Accuracy and Up-to-Dateness. The experimental group's opinions about the accuracy and up-to-dateness of the material presented are shown in Table 13. Approximately half of this group indicated that the lecture materials were both accurate and up-to-date. Interestingly, about four out of ten experienced participants said they were not able to judge the degree of accuracy and up-to-dateness. Perhaps these persons' opinions about their own knowledge of PERT but limited

Table 13 - Accuracy and Currency of Lecture Material

Description	Frequency	Per Cent
Both accurate and up-to-date	64	49.2
Some inaccuracies but up-to-date	6	4.6
Accurate but not up-to-date	9	6.9
Neither accurate or up-to-date	0	0.0
Not able to judge	50	38.5
Total	129	100.0

experience with it did permit them to make judgments about coverage of basic concepts and principles because that is with what they were familiar. They appeared unable, on the other hand, to make judgments about accuracy and up-to-dateness since they had not developed a high level of knowledge gained through implementation of PERT in project situations.

One possible criterion as to the quality of information presented might be whether or not an individual would utilize the material in

his local situation. One item specifically asked the participant if the materials were judged to be sufficient quality that he would use them for a local PERT orientation session. The responses to this item are presented as Table 14. About two-thirds of the prior PERT knowledge

Table 14 - Utilization by Participants of Lecture Material for Local Orientation

Utilization	Frequency	Per Cent
Would use	86	66.2
Would not use	20	15.4
Not able to judge	21	16.2
Total	128	97.8

group indicated that the lectures were of a sufficient quality that they would utilize the material in PERT orientations for their own staff.

Summary. To summarize the data on the quality of the lectures, it would appear that the substantive material presented adequately covered and explained the basic nature of PERT and was also of sufficient quality that others would likely use it in their own situation. In view of their limited prior experience and knowledge with PERT, the participants did not feel that they were able to make strong judgments about the accuracy and up-to-dateness of the material. Since the main purpose of the lecture was to introduce PERT to the educational community, the message presented as judged by participants possessing some experience and knowledge about the technique, appears to have been of sufficient quality to reach this objective.

Some additional evidence about the quality of the lectures was volunteered by the participants during informal conversations with the

project staff. The general substance of these remarks was that the lectures were equal, and in some cases superior, to presentations made by professional management groups which the participant had previously attended.

This section of the report should not be left without reference to a finding that was somewhat unexpected. Reference is made to the relatively large proportion of participants that had some prior acquaintance with PERT. The implications of this observation for other dissemination lecture situations are that possible participants come knowing about the topic but by attending hope to pick up some new approach, interpretation, or information to help in their decision about the topic. With the distinct possibility of participants knowing the topic, the sponsors of the lecture might well consider the desirability of arranging for participant grouping according to prior knowledge or restricting attendance to particular groups. Appropriate lecture and/or instructional materials then could be prepared.

Information Utilization

The major goal of the follow-up survey was to determine if and how the information about PERT had been used subsequent to its presentation. Several questions were developed to secure evidence regarding the participants' plans for and actual use of the information presented as a means of assessing this function of the dissemination lecture series. No baseline data exists by which one could state that the lectures did, in fact, increase utilization of the PERT technique. Further, participants' reasons for attending the lecture would be an important factor contributing to any subsequent utilization. Participants attending to learn about PERT would probably have

different plans for utilization than would participants already possessing some experience. The latter group might have attended to gain additional information so as to make more effective use of the technique. In view of the relatively large percentage of participants who had prior PERT experience, it was thought advisable that analysis of the data with regard to utilization should reflect not only the total group but also the degree of PERT experience. Accordingly, results presented in this section show responses for both the total group and for those with and without prior PERT experience.

Plans for Use. Each participant was asked to describe any plans he had for using the information presented at the lectures. Recognition was given to the possibility that participants might have had several plans for usage by providing several alternatives and asking them to check as many as desired. Table 15 presents a listing of the

Table 15 - Plans for Utilization of PERT Information

Plans for Use	Total		Experience		No Experience	
	f	%	f	%	f	%
Planning Project Proposal	50	17	30	23	20	12
Specific Project Management	38	13	26	20	12	7
Multi-Project Control	38	13	26	20	12	7
Instruction	22	8	12	9	10	6
No Plans but Curious About PERT	164	56	49	38	114	70
Other	25	9	16	12	9	6

plans for use as they appeared in the questionnaire item along with the responses for the total group and the groups with and without PERT experience. Over one-half of the total group indicated that

they had no plans for using the information but were simply curious to learn about PERT. Approximately two out of ten said they anticipated using it for planning a project proposal. The experienced group also had a large percentage checking no specific plans for use in a specific situation but did indicate more specific plans for usage. The inexperienced group, on the other hand, was much like the total group in that 7 out of 10 persons indicated no plans for use but attended the lectures simply to know about PERT. It would appear that participants already possessing experience or information about the technique had more definite and immediate plans for using the information presented than did persons not having such experience. These results suggest that in planning for dissemination of information about a new technique, it might be fruitful to set up different sessions for those with and without experience in the technique since they do appear to have different plans for using the information.

Actual Use. Even though an individual attended with a projected plan for using the information, it is possible that such plans may not have been fulfilled. One item, therefore, asked the participants to indicate whether or not actual use had been made of PERT on a project. Response to this item is presented as Table 16. Seven out of ten respondents indicated that they did not make any actual use of PERT on a project. Participants experienced in PERT were about evenly divided with regard to actual use with 57 per cent saying they did not use it but 42 per cent saying they did actually make some use of it. Those inexperienced with PERT had responses similar to the total group. It would appear from the above that persons attending the lecture with no plans for use but interested in learning

Table 16 - Actual Use of PERT on a Project

Use	Total Group f	Total Group %	Experience f	Experience %	No Experience f	No Experience %
Yes	83	28.2	54	41.5	29	17.8
No	205	69.7	74	56.9	130	79.8
No Response	6	2.0	2	1.5	4	2.5
Total	294	100.0	130	100.0	163	100.0

about PERT made little actual use of the information. Those participants familiar with the technique and attending the lectures with more definitive plans subsequently carried through by making actual use of the technique. A possible interpretation is that attendance at the lectures may have spurred them to initiate applications because of increased knowledge or simply reinforced whatever plans they had in mind when they came to the lecture.

PERT Implementation. In addition to indicating actual use, participants were asked also to describe briefly the type of project on which PERT was implemented. The number of different project implementations was tabulated. Of the total group, 210 participants, or 71 per cent, identified no projects; 70 persons, or 24 per cent, indicated one project; 10 persons, or 3 per cent, indicated two projects; and three persons, or 1 per cent, indicated three or more projects. The projects listed were classified according to the general description of the project as provided by the participant. Table 17 presents a listing of the general nature of project applications sub-divided by those who had PERT experience and those who did not. A total of 63 different projects were reported by the experienced group while the no-experience group reported only 35 projects. For

Table 17 - PERT Applications by Project Type and PERT Experience

General Nature of Project	PERT Experience	No PERT Experience
Administration	12	6
Survey	10	6
Developmental	10	5
Experimental	5	3
Curriculum Instruction	5	9
Building Construction	3	0
Proposal Preparation	3	1
Doctoral Dissertation	2	1
Not Classifiable	13	4
Totals	63	35

the experienced group, the most frequent type of project identified was one dealing with an administrative problem. Survey and developmental type projects were the second most frequently listed projects. For the inexperienced group, projects of a curriculum and/or instructional nature were the most frequent applications followed by an administrative and survey project. Seventeen of the projects described by both groups did not seem to fit in any of the above categories and thus are reported as "not classifiable." Thirteen come from the experienced group and four from the inexperienced group.

The above results, while reflecting a limited implementation, suggest that the participants saw PERT as being suitable for a variety of different applications, a point often stressed by PERT specialists as one of its basic values.

Degree of Implementation. For the projects reported above, the participants were asked to indicate the degree of PERT implementation on the application. Table 18 presents the degree of implementation

Table 18 - Degree of PERT Implementation on Projects

Degree of Implementation	Total		Experience		No Experience	
	f	%	f	%	f	%
Network only	23	8	10	8	13	8
Network plus time estimated	23	8	17	3	6	4
Network, time estimates, and schedules	24	8	16	12	8	5
Above plus up-dates	11	4	8	6	3	2
Other	3	1	3	2	0	0
No Response	216	71	76	59	133	82
Total	294	100	130	100	163	100

again sub-divided by experienced and no-experience groups. The general pattern shown in the table showed that various degrees of implementation were employed on the several projects. The experienced group made more extensive implementations than the non-experienced group which might be somewhat expected in view of the former group's knowledge.

Dissemination Activities. In addition to implementation on projects, another form of utilization of the material presented would be to disseminate it to persons not attending the lecture by a participant who did attend. Participants were asked to indicate if any subsequent use of the information had been in an instructional context subsequent to the lecture. Table 19 shows such instructional utilization categorized by group size and audience nature. A total of 77 such presentations were made by the respondents. The audiences consisted generally of fellow staff members meeting in relatively small groups. The second most frequent audience consisted of students and in fairly large groups. It would appear from these data

Table 19 - Instructional Presentations by Audience and Group Size

Group Size	Audience				Total
	Students	Staff	Project Personnel	Other	
0-9	3	22	8	3	36
10-19	7	8	0	1	16
20-29	6	3	1	1	11
30-39	6	1	0	0	7
40-49	1	1	0	0	2
50-59	0	0	0	1	1
60-69	1	0	0	0	1
70-79	1	0	0	0	1
80-89	0	0	0	0	0
90-99	1	0	0	1	1
Totals	26	35	9	7	77

that participants did make subsequent use of the information by presenting it informally to small groups of colleagues, and to students in a more formal class situation. The latter interpretation is somewhat speculative since no item dealt specifically with this point but is inferred from the data in the table.

Reasons for Non-Use of PERT. Besides knowing what actual use had been made of the information presented, it would be equally important to know or have some idea of the reasons the information presented on PERT was not used by participants. Since it seems reasonable that the institution with which an individual is affiliated and its principal function might have some relationship to using the information, the responses to the item asking about reasons for nonuse were classified by institution type and function. The results of this analysis are shown in Table 20.

The reason most often given for not using PERT was its unsuitability for the type of work in which the participant was involved.

Table 20 - Reasons for Non-Use of PERT by Institution Type and Function[1]

Reason	Total		Universities				State Agencies				School Systems				Other			
	f	%	A	R	T	S	A	R	T	S	A	R	T	S	A	R	T	S
Not suitable for type of work	62	21	10	11	19	2	0	1	0	4	4	3	1	3	1	1	2	0
Too Complicated	6	2	0	2	1	0	0	0	0	0	1	1	1	0	0	0	0	0
Not up to expectation	4	1	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0
Insufficient knowledge about technique	44	15	3	9	13	2	0	1	0	0	7	1	3	3	0	0	0	0
Involves too much initial time and effort	32	11	3	6	8	2	0	1	0	1	7	2	0	2	0	0	0	0
Lack of computer to process data	12	4	1	0	4	0	0	0	0	0	5	1	0	1	0	0	0	0
Other	78	27	5	15	24	7	1	6	0	2	9	1	3	1	0	1	1	2

1. Function: A = Administrator, R = Research, T = Teaching, S = Service
2. Entries in cells other than for total group are simple frequencies.

Analysis of this reason by institution type and function reveals that most of the participants came from universities, particularly in the teaching area. A similar pattern appeared for the second major reason given for not using the technique which was insufficient knowledge about it. Twenty-seven per cent of the participants provided reasons other than those supplied on the questionnaire. An analysis of these other reasons showed that the 29 of the 78 persons said that there was no opportunity or need to do so and/or having no project available on which to implement it. Other frequently occurring supplied reasons were no time available (9 persons), the technique was suitable only for large-scale projects (6 persons), and planned to use it in the future (5 persons). A total of 19 different reasons for not using the technique were supplied within the "other" category.

A possible interpretation of the reasons for not using PERT subsequent to the lectures might be that the participants came with curiosity to learn about PERT but after having it described to them found that it was not appropriate for their situation on the basis of some criteria known only to the participant. It would be interesting to know the criteria employed by the participants for deciding the technique was not suitable for them. It also seems a little difficult to comprehend why a person would give two or more days of his time to attend lectures on a technique which had proved its value in the management of research and then decide that the technique was unsuitable.

Seeking of Other Information. One general goal of dissemination activities is to motivate a recipient to seek further knowledge about the information presented. One method of assessing this aspect of the lecture series would be to determine the extent to which participants

sought such additional knowledge and/or assistance. Four items asked for information relative to this point.

One item asked participants for whom the lecture was the first introduction to PERT, if they were motivated to attend subsequent presentations. Table 21 presents the responses to this item. Twenty-

Table 21 - Motivation to Attend Other PERT Sessions

Motivation	Frequency	Per Cent
Yes	74	25
No	139	47
No Response	81	28
Totals	294	100

five per cent of the participants said they were so motivated while 47 per cent indicated they were not. Roughly three out of ten participants did not respond to the item apparently feeling that it was not relevant to them.

The participants were also asked to identify any subsequent presentations they did attend. An examination of only 12 responses to this item showed that seven persons attended the PERT workshop held at Ohio State University, one person attended the PERT Orientation and Training Center in Washington, D. C., and four persons attended some local presentation not otherwise identified. Nineteen participants indicated that they wanted to attend a presentation but either could not find one or were unable to attend for some reason (e.g., lack of time or money). It would appear from participants' responses to this set of items that some provision should be made to provide information about additional opportunities, if known, at the time of the original dissemination so that those desiring more information could obtain it.

Consultant Use. It is possible that even with an understanding of the knowledge presented, an individual implementing the PERT technique would feel that need for additional information and skills that might be provided only by a consultant or PERT specialist. The availability of such consultants in the case of a specialized technique such as PERT could well be a limiting factor in subsequent utilization of the information. Utilization of such persons would also reflect participant interest in knowing more about the technique than that provided by the lectures. Participants were asked to indicate if they had employed the services of a PERT consultant in any subsequent use of the technique. Of the total respondent group of 294 persons, only ten persons said that they did draw upon the services of a consultant while three said that they wanted to do so but could not find or locate such a person. In view of the responses to this item, it would appear that limited use was made of consultants but if there was a desire to use one that there was no major obstacle to locating a consultant.

The results presented in this section perhaps reflect the previous findings that many persons had no plans for using the technique plus the limited number who made use of the technique as presented in the section on project applications. The availability of consultant help appears not to be a limiting factor in subsequent utilization, at least in the case of the PERT technique.

Contact with PERT Sources. Effective dissemination procedures should identify sources a person could contact for further information. In the case of the lectures, sources of additional PERT information were made available to participants as part of the lecture content. A bulletin by the project staff listing several sources of information

was made available to those persons requesting such information but not distributed to all participants in a systematic fashion. Since such information was disseminated as part of the lectures, it would be desirable to know what sources were contacted both from the point of view of the participant's seeking additional knowledge and to assist in determining the value of including this information as part of the lecture.

Participants were asked to list any agencies they remembered contacting for information. Tabulation of the responses in terms of number of agencies contacted revealed that 254 or 86 per cent made no contacts while 40 or 14 per cent made one or more contacts. The several agencies contacted are presented in Table 22. It is not

Table 22 - Agencies Contacted for PERT Information

Agency	Frequency
PERT Project (O.S.U.)	12
PERT Orientation and Training Center, Washington, D. C.	5
U. S. Office of Education	3
Special Projects Office, U. S. Navy	3
U. S. Government Printing Office	5
U. S. Air Force	4
Business-Industrial Concerns	9
Miscellaneous Governmental Agencies	2
Colleges or Universities	2
Publishers	2
Total	47

surprising to find that the PERT project was frequently mentioned since it was the sponsoring agency for the lectures. The table does show that a variety of agencies were contacted perhaps reflecting the interest in PERT held by a limited number of participants anxious to secure more information. Expectations that providing persons with information

about PERT agencies with the hope that contacts will be made for additional information seem not to be too realistic in terms of the data obtained in this part of the study.

Summary. The results presented in this section on the utilization of information presented to the participants tend to show that subsequent use of PERT was somewhat related to prior experience with the technique. While over one-half of the participants had no initial plans for using the information, participants with PERT experience had a larger proportion having more definite plans for use than the inexperienced group. A similar relationship was noted with regard to the degree of implementation on an actual project although for both groups and the total actual use of PERT was limited. Reasons for not using the information centered primarily on the lack of either a suitable project and/or time to do so. Only a relatively small number of participants indicated that the technique was unsuitable for their work.

The information presented was also subsequently used by a small proportion of participants to tell other colleagues and students about PERT. A similar small proportion of participants were motivated to attend other PERT presentations and to seek information from other sources.

Assessment of Dissemination Technique

The principal means used by the PERT project to transmit information to other persons about PERT were (1) the series of lectures described here, (2) the preparation of a monograph to be published by the U. S. Office of Education and distributed to the educational community, and (3) a series of informal bulletins. To secure some

assessment of the usefulness of the first two procedures to disseminate information about PERT, participants were asked to rank order several common dissemination techniques in terms of their potential value as an initial means of disseminating to education new techniques such as PERT. Participants were also asked to indicate under what condition they would attempt to secure a copy of the monograph when it becomes available.

Ranking of Dissemination Techniques. Participants varied in their behavior to the ranking item with some persons ranking all eight techniques listed while others chose to rank only part of the list. The results presented for this item, therefore, were based upon only respondents ranking all items. It was felt that participants possessing prior knowledge of PERT might possibly have some idea of how material of this nature should be presented and thus would rank the various techniques in an order different from persons who did not have such experience. The analysis for this item, therefore, consisted of securing the rank order of techniques for the total group plus separate rank orders for participants experienced and inexperienced with PERT. Table 23 presents the median rank for each technique plus a final rank for the total group.

Inspection of the table shows that the dissemination lecture was ranked first by the total and experienced groups followed by the workshop and the instructional film. The inexperienced group, on the other hand, ranked the workshop first. Except for this one change, the final rank order for the PERT inexperienced group was essentially the same as for the total group. The PERT experienced group indicated that the use of professional journals and the monograph were more

Table 23 - Participants' Rank Order of Dissemination Techniques

Dissemination Technique	Total Group		PERT Experience		No PERT Experience	
	Median Rank	Rank Order	Median Rank	Rank Order	Median Rank	Rank Order
Dissemination Lecture	2.10	1	2.01	1	2.18	2
Workshop	2.14	2	2.21	2	2.14	1
Instructional Film	3.85	3	3.93	3	3.79	3
Professional Meeting	4.89	4	5.14	6	4.75	4
Monograph	5.05	5	4.79	4	4.89	5
Professional Journal	5.07	6	4.88	5	5.16	6
College Course	5.32	7	5.43	7	5.25	7
Other	7.96	8	7.96	8	7.87	8
Total	N = 245		N = 104		N = 140	

desirable methods of dissemination than presentations at professional meetings and college courses while the inexperienced group felt that professional meetings were of more value than publications. One interesting finding is the apparent value placed on the instructional film. It is quite possible that the use of a film on PERT produced by North American Aviation and used as part of the lecture series may have been influential in causing this item to rank as highly as it did. One could speculate on how the participants would have rated the film as a technique had it not been included as part of the lectures.

It should be noted that a workshop was held at The Ohio State University shortly after completion of the lectures and several persons attended both. Reports from those persons who attended both indicated that they received more useful information from the workshop session than the dissemination lecture because a more extended opportunity was provided to work on their own problems under supervision of persons knowledgeable about the technique. If their reactions

are typical of others who attend workshops this would account for the technique being ranked so high, and most particularly by persons who have no or limited experience with the technique.

Eighteen persons suggested a variety of techniques under the "other" category. An examination of these responses indicates that some kind of discussion in small groups, problem-oriented clinics, in-service meetings, and opportunities to see and use PERT in an operational setting were frequently recommended as worthwhile techniques. Three persons suggested that some type of consulting office be established to provide assistance in implementing PERT on a project.

The general result from this item supports the position taken by Havelock and Benne (4) that the ". . . ideal vehicle for transmission of new knowledge of a complex nature would appear to be comprehensive in-residence learning sessions." They go on to indicate that the most important and effective means of transmission is the opportunity ". . . afforded the receiver to somehow experience the new information either through observing a demonstration or by trying it out himself." Considering the lecture as a face-to-face demonstration with an opportunity for try-out by means of a practice problem, the rank order assigned by the participants to the lecture technique would provide evidence that the dissemination technique used by the PERT project was at least appropriate if not effective.

Monograph

In view of the plans of the U. S. Office of Education to publish and distribute a monograph at some cost, it was thought desirable to have some idea of the effort participants would exert to secure such a monograph. The final item on the questionnaire was structured in a

manner that would determine if the expenditure of money to secure information was a limiting factor in this type of dissemination. The item could also be interpreted in terms of the degree of effort that a participant would expend in order to secure information. Table 24 presents the participants' responses to this item. Asking

Table 24 - Degree of Effort to Secure PERT Monograph

Effort	Frequency	Per Cent
Would Purchase Copy	145	49.3
Would Write for Free Copy	93	31.6
Would Read if Sent Free	29	9.9
Would Not Purchase Copy	4	1.4
Other	13	4.4
No Response	10	3.4
Totals	294	100

persons to expend resources for information appears not to be a limiting factor since approximately 50 per cent of the respondents indicated that they would buy a copy of the monograph. The same results can be interpreted to mean that the respondents wanted the information strongly enough that they would buy a copy. It should be pointed out that these results may be slightly misleading because of the fact that respondents were asked only to indicate one response but the question stem had in it the word "conditions" rather than "condition." In coding the responses, a participant who marked all three alternatives that he would read it if sent free, write for a free copy, as well as purchase a copy was coded as saying that he would purchase a copy since it was felt that this represented a stronger level of effort than simply reading or sending for a gratis copy. Of the group of the

persons responding Other, several indicated they would have their organization purchase the copy or preferred to examine the publication before purchase.

It is interesting to note the relative rank position assigned by the participants to the monograph as a useful means of disseminating information in view of the fact that a large amount of the PERT project staff time was involved in preparing the monograph. It is quite likely that the monograph will be the initial experience with PERT for many persons in the educational community. One might question the possible value of such a monograph in view of the participants' responses that a face-to-face situation is a more effective means of dissemination.

Summary. To summarize this section of the report, it could be said the dissemination lecture technique as structured and employed by the PERT project was a worthwhile approach to presenting the desired information to the educational community. It is believed that the face-to-face situation plus the opportunity to practice the skills incorporated in the lecture were influential factors in causing the participants to rank this technique so highly among a list of possible techniques. The participants' ranking of alternative techniques would support the general thesis that face-to-face communication is an effective and important means of presenting new knowledge.

The results presented in this section about asking possible recipients to expend funds to secure published material relating to the new information would not appear to be a strong barrier to disseminating knowledge by this means even though this means of presenting new information is not too highly valued by possible recipients as a useful technique.

CHAPTER IV

Summary, Conclusions, and Recommendations

The purpose of this chapter is to summarize the purposes, procedures, and findings of the present investigation. Several conclusions derived from the findings are presented and some recommendations are made relative to dissemination activities of the nature discussed in this report.

Purpose

During March and April of 1965, the PERT project staff presented a series of lectures at twelve major universities in the United States. The purposes of the lectures were to inform the educational community about PERT, a management technique developed for planning and controlling research and development activities, and to encourage its use. To determine the extent to which these purposes had been accomplished, it was decided to conduct a follow-up of participants attending the lectures. Two primary objectives guided the nature of the follow-up study. One objective was to determine the degree of utilization by persons attending the lectures of the information presented. The second was to use the opportunity offered by the follow-up study to seek information which might give some insight into the dissemination process in the field of education.

Procedures

With the above objectives in mind, a questionnaire was designed which would provide information about the nature of the audience, plans for and actual utilization of the information, quality of the message, and preference for selected dissemination activities. The questionnaire was mailed during November and December of 1965 to a total of 397 lecture participants, identified from registration lists for each lecture.

A total of 294 questionnaires, or 74 per cent, were returned by December 31, 1965, the cut-off date for analysis. Questionnaire return by lecture location varied between 50 and 100 per cent with the median response being 73 per cent. The findings presented below are based upon the responses from the above group of useable questionnaires.

Summary of Findings

To provide a systematic presentation of the responses to specific questionnaire items, the topical organization used in Chapter III for presenting analysis of responses has also been employed here. The general finding for each item relating to the topic is presented. The reader is referred to Chapter III for detailed information about responses to each item.

A. Regional Coverage

1. Using home states as a criterion, approximately 95 per cent of the attendees at a given lecture were from the state in which the lecture was held.

B. Nature of Audience

2. Forty-five per cent of the participants had earned doctorate degrees, 40 per cent had the master's degree, and the remaining participants holding bachelor's degree or less.

3. Approximately 40 per cent had major staff positions in their institutions with lesser percentage holding Executive (33 per cent), Assistant Executive (10 per cent) and minor staff positions (17 per cent).

4. Approximately two-thirds of the participants were associated with colleges and universities with lesser percentage coming from state agencies (10 per cent) and school systems (18 per cent).

5. Thirty-four per cent indicated the primary function of the unit to which they were attached was teaching with lesser percentages indicating research (30 per cent), administration (21 per cent), and service (14 per cent).

6. Approximately 41 per cent indicated no personal responsibility for research project management and/or administration with 59 per cent indicating some form of responsibility for research project management.

7. The most common source of funding for projects for which participants had responsibility was federal government (29 per cent) followed by local funds (18 per cent) and state funds (10 per cent). Eighteen per cent of the projects had no funding.

C. Awareness of Lectures and Attendance

8. The most common means of becoming aware of the lecture series was by some informal communication from a colleague (52.4 per cent) with more formal means of developing awareness of the series having lesser percentages.

9. Seventy per cent of the participants attended on a voluntary basis and 30 per cent attended as designated institutional representatives.

10. Sixty-five per cent of the participants attended both days of the lecture with lesser percentages attending only the first day, second day, or parts of any one day.

D. Quality of Message

11. Forty-four per cent of the respondents indicated that they had some prior knowledge and experience with PERT.

12. Using judgments obtained from the prior experience group, 75.4 per cent indicated that the lectures adequately covered and explained PERT concepts and principles.

13. With regard to accuracy and currency of material presented, 49.2 per cent of the experienced group indicated that the lectures were accurate and up-to-date but about 39 per cent said they were unable to make judgment on this matter.

14. Approximately two-thirds of the participants indicated that the lectures were of sufficient quality that they would use the material presented to orient fellow staff members.

E. Information Utilization

15. Fifty-six per cent of the respondents indicated that they had no particular plans for using PERT when they attended the lectures.

16. When sub-divided on the basis of prior PERT experience, 38 per cent of the experienced group indicated no plans for use, while 70 per cent of the inexperienced group said they had no plans.

17. Approximately 70 per cent of the total group indicated no actual use of PERT on a project.

18. Eighty per cent of the inexperienced group indicated no use while approximately 60 per cent of the experienced group said no use of PERT had been made on an actual project.

19. Within the group of participants who had made use of PERT, 24 per cent had applied it to one project with lesser percentages to two or more projects.

20. The most frequent type of project to which application had been made dealt with an administrative situation.

21. The degree of implementation on project application for the total group showed equal percentages (8 per cent) establishing a network only, a network plus time estimate, and a network plus time estimate plus schedules.

22. The experienced group had a larger percentage (12 per cent) than did the inexperienced group (5 per cent) implementing the technique at higher levels (networks, time estimates, and schedules).

23. The information presented at the lectures was utilized to make 77 subsequent presentations to students, staff, and project personnel groups.

24. The most frequent reason for not using the information was the unsuitability for the participants' type of work (21 per cent) followed by insufficient knowledge of the technique (15 per cent). Other reasons had lesser percentages.

25. Twenty-five per cent of the responses indicated a desire to attend other PERT presentations as a consequence of attending the lecture series.

26. Ten out of the 294 participants indicated that subsequent use had been made of PERT consultants.

27. A total of 47 contacts were made to other agencies for additional information about PERT with The Ohio State University PERT project cited as the most frequent (12 times) source.

F. Dissemination Techniques

28. The dissemination lecture was ranked first by the total group as the most effective technique for disseminating information to the educational community about new techniques such as PERT. Other techniques in order of ranking were workshops, instructional films, professional meetings, monographs, professional journals, and college courses. Slightly different rank orders were obtained when participants were divided on the basis of PERT experience.

29. Approximately one-half (49.3 per cent) of the participants indicated that they would purchase the PERT monograph to be published by the U. S. Office of Education while 31.6 per cent said they would write for a free copy and about 10 per cent said they would read it if sent free.

Conclusions

On the bases of the participants' responses as presented and analyzed in Chapter III, and the summary findings, the several conclusions are derivable.

1. The original plan of having each lecture location serving as a regional center for adjacent states was not met in practice. This conclusion is based on data obtained from participant state of origin showing the predominant number coming from the state in which the lecture was located.

2. The local coordinator for each center played an important role in determining the nature of the audience. This conclusion is based upon data relating to the participant's institution type and function plus highest earned degree.

3. The audience consisted of persons who voluntarily attended the lectures out of curiosity but whose professional interests did not reside exclusively in the area of research and development. This conclusion is derived from the data on professional title, agency function, research responsibility, attendance conditions, and plans for information use.

4. Informal communication between colleagues plays a more important role than formal techniques in creating awareness of dissemination. This conclusion is based upon data showing that notes and conversations were cited by participants as the most frequent means by which the lectures were called to their attention.

5. Participants' expectations of gain from the lecture appeared to have been met in view of the large proportion who attended only for informational purposes and indicated no particular plans for using the information. This conclusion is based upon data on plans for use of the information and data regarding actual use.

6. Utilization of the information presented appeared to be positively related to the participant's prior knowledge about the technique. This conclusion is based upon data from participants' plans for use, actual project application, and prior knowledge of the technique.

7. The quality of the message was satisfactory for its purpose. This conclusion is based upon data secured from experienced participants' judgments about the lectures' content, accuracy, and currency and possible use for other dissemination activities.

8. Non-utilization of information appears to be related to the participants' perception or judgment about its suitability for his

situation and the degree of knowledge possessed. This conclusion is based upon data relating to participants' reasons for not using the technique plus data from implementation on projects, and prior PERT experience.

9. Only a relatively small proportion of participants can be expected to make use of the information presented. This conclusion is based upon data relating to actual use, desire to attend other presentations, and steps taken to secure additional information.

10. Face-to-face dissemination techniques in the form of lectures and workshops appear to be the most useful procedures for introducing a technique such as PERT to the educational community. This conclusion is based upon data relating to the participant rank-ordering of possible dissemination techniques.

11. Participants desiring additional information about a topic do not regard the expenditure of funds as a major obstacle to securing that information. This conclusion is based on data regarding effort to be expended in securing the PERT monograph.

Recommendations

The findings and conclusions presented above plus the experience gained by the PERT project staff in actual conduct of the lectures can be combined to suggest some recommendations for conducting similar types of dissemination activities. Three such recommendations appear below.

1. The selection of the local center coordinators should be made carefully since this person is quite influential in determining audience composition. Techniques employed by the coordinator to create awareness of the activity plus his own professional orientation are quite influential and important factors here.

2. It is quite likely that participants will attend a dissemination activity with already existing degrees of knowledge about the technique and plans for using it. Therefore, it would appear advisable and/or desirable to assess participant background, so that one or more session could be arranged to deal with differential knowledge and plans.

3. More workshop-like activities should be included so that participants can be actively involved as soon as possible in the topic being presented.

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APPENDIX A

The PERT Project
School of Education
The Ohio State University
41 West 11th Avenue
Columbus, Ohio 43210

PERT Dissemination Lecture Survey

Directions: Unless indicated otherwise, respond to each item by marking an "X" in the box before the appropriate response. Note that some items ask for more than one response. If additional explanatory material is necessary, please write in the margin by the item for which the material is relevant.

1. What is your highest earned degree?

- ☐1. No degree
- ☐2 Bachelor's
- ☐3 Master's
- ☐4 Doctorate

2 Please provide the following information concerning your position at the time you attended the lectures (March-April 1965)

_____
Your title

_____
Branch, Department, or Division

_____
Institution or agency

_____
City and State

3. What was the general type of institution or agency with which you were connected at the time of attending the PERT lectures?

- ☐1 College or university
- ☐2 Private Foundation
- ☐3 Governmental agency (federal)
- ☐4 Governmental agency (state)
- ☐5 Private or public school system
- ☐6 Business or industry
- ☐7 Military
- ☐8 Other (list)_____

(Continued on Page 2)

4. What was the principal function of the unit to which you were attached?

- ☐ 1. Administration
- ☐ 2. Research
- ☐ 3. Teaching
- ☐ 4. Service

5. Describe the type of responsibility you had for the planning and execution of research projects (funded or non-funded) at the time of attending the lectures.

- ☐ 1. No personal administrative responsibility for a research project
- ☐ 2. Personal responsibility for one or more projects for which I am the principal investigator
- ☐ 3. Administrative responsibility for an office directing one or more research projects
- ☐ 4 Responsibility for the management of a project under the direction of a principal investigator.
- ☐ 5 Other (Specify)_____

6. Indicate the type(s) for which you had responsibility according to your response to item 5: (check more than one if needed)

- ☐ 1. Non-funded project
- ☐ 2. Locally funded project
- ☐ 3. State funded project
- ☐ 4. Federally funded project
- ☐ 5. Other (specify)_____

7. How did you become aware of the PERT dissemination lecture series?

- ☐ 1. Announcement distributed at 1965 AERA meeting
- ☐ 2. Announcement in local news media (newspaper, radio, etc.)
- ☐ 3 Announcement in professional journals or newsletters (Phi Delta Kappan, American Psychologist, etc.)
- ☐ 4. Conversation or note from colleague
- ☐ 5 Other (specify)_____

8. Please indicate the conditions under which you attended the PERT lectures:

- ☐ 1. Designated representative of an agency of institution
- ☐ 2 Volunteer attendee because of personal interest
- ☐ 3 Other (specify)_____

(Continued on Page 3)

9. Describe your attendance at the dissemination lectures:

☐1. Attended only first day
☐2. Attended only the second day
☐3. Attended both days
☐4. Attended only parts of any one day

10. Were you acquainted with PERT prior to attending the dissemination lectures?

☐1. Yes
☐2. No

IF YOU ANSWERED YES TO ITEM 10, RESPOND TO ITEMS 11 THRU 15. IF NO, CONTINUE ON AT ITEM 16.

11. How would you describe your knowledge about PERT?

☐1. Little knowledge
☐2. Some knowledge
☐3. Much knowledge

12. How would you describe your experience with PERT?

☐1. No practical experience
☐2. Little practical experience
☐3. Some practical experience
☐4. Much practical experience

13. How would you describe the lectures with regard to coverage and explanation of basic PERT concepts and principles?

☐1. Basic concepts were not adequately covered nor explained
☐2. Basic concepts were adequately covered but not sufficiently explained
☐3. Adequately covered and explained
☐4. Not able to judge

14. How would you describe the accuracy and up-to-dateness of the material presented in the lecture?

☐1. Both accurate and up-to-date
☐2. Some inaccuracies but up-to-date
☐3. Accurate but not up-to-date
☐4. Neither accurate nor up-to-date
☐5. Not able to judge

(Continued on Page 4)

15. Did you feel that ideas and content of the lectures were of sufficient quality that you would utilize them in presenting a PERT orientation lecture to your own agency or staff?

- ☐ 1. Yes
- ☐ 2. No
- ☐ 3. Not able to judge

16. Describe any plans you had for using the information presented at the lectures (check more than one if necessary):

- ☐ 1. For use in planning project proposal
- ☐ 2. As a management system for a specific on-going project
- ☐ 3. To enable me to control several on-going projects under my responsibility
- ☐ 4. To conduct instruction
- ☐ 5. I had no immediate plans for using it since I was just curious to learn about PERT
- ☐ 6. Other (specify)_____

17. Did you actually use PERT on a new or on-going project?

- ☐ 1. Yes
- ☐ 2. No

18. If your answer to item 17 was Yes, describe briefly the <u>nature</u> of the project(s) on which <u>you</u> implemented the technique (e.g., curriculum development projects, experimental research project, school survey project, etc.).

_____

_____

19. Describe the degree of implementation for the project identified in item 18. If None, go on to item 20. (Check only highest level of implementation).

- ☐ 1. Developed only a network
- ☐ 2. Developed a network and secured time estimates
- ☐ 3. Developed a network, secured time estimates, and established a schedule for control purposes
- ☐ 4. Accomplished actions described in response 3 plus conducting one or more up-dates of the project
- ☐ 5. Other (specify)_____

(Continued on Page 5)

20. If you did not or have not utilized or implemented PERT, please indicate your reason (check more than one if necessary).

☐1. It is not suitable for my type of work
☐2. It is too complicated
☐3. It was not what I thought it was going to be
☐4. Insufficient knowledge about the technique
☐5. Involves too much initial effort and time
☐6. Lack of a computer to process data
☐7. Other (specify)_____

21. If you made any presentation of an instructional nature based upon information secured from attending the dissemination lectures, indicate the nature of the audience(s) and the approximate size of the group(s).

	Group	Size
☐1.	Students	_____
☐2.	Fellow staff members	_____
☐3.	Research project personnel	_____
☐4.	Other (specify)_____	_____

22. If the lecture was your first introduction to PERT, were you motivated to attend any other presentations, seminars, or courses on PERT as a consequence of attending the dissemination lectures?

☐1. Yes
☐2. No

23. If Yes to item 22, identify below any presentation(s) you did attend. If None, so indicate.

_____

_____

24. Have you employed or utilized PERT consultants in your activities since attending the dissemination lectures?

☐1. Yes
☐2. I wanted to but couldn't locate one
☐3. No

25. List below any offices or agencies you can remember contacting for further information about PERT. If None, so indicate.

Agency	Location
_____	_____
_____	_____
_____	_____

(Continued on Page 6)

26. Listed below are several possible procedures for presenting information on a new technique, such as PERT, to the educational community. Rank from 1 to 8 the items listed in terms of how you would rate their effectiveness as an initial means of dissemination.

- ☐ 1. Dissemination lectures
- ☐ 2. Instructional film
- ☐ 3. Monograph or book
- ☐ 4. Article(s) in professional journal(s)
- ☐ 5. Presentation(s) at national professional meeting(s)
- ☐ 6. College level course(s)
- ☐ 7. Workshop(s)
- ☐ 8. Other (specify)_____

27. The U. S. Office of Education is planning to publish a monograph on PERT applications in education. Under what conditions would you attempt to secure such a monograph?

- ☐ 1. I would read it if the monograph was sent to me gratis
- ☐ 2. I would write for a copy if available free
- ☐ 3. I would buy a copy if it had to be purchased
- ☐ 4. I would <u>not</u> buy a copy if it had to be purchased
- ☐ 5. Other (specify)_____

IF YOU HAVE MADE ANY APPLICATION OF PERT TO EDUCATIONAL PROJECTS AND HAVE AVAILABLE NETWORKS, COMPUTER REPORTS, AND SIMILAR MATERIALS, WE WOULD APPRECIATE RECEIVING SUCH INFORMATION FOR OUR FILES. PLEASE SEND TO THE ADDRESS AT THE TOP OF THE FIRST PAGE.

<u>Be sure you have responded to all items as required</u>

<u>THANK YOU FOR YOUR COOPERATION</u>

The research reported herein was supported through the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education and Welfare.

APPENDIX B

THE OHIO STATE UNIVERSITY
COLLEGE OF EDUCATION
1945 NORTH HIGH STREET
COLUMBUS, OHIO 43210

SCHOOL OF EDUCATION
JOHN A. RAMSEYER, *Director*

EGON G. GUBA, *Assistant Director*
M. KARL OPENSHAW, *Assistant Director*
ARLISS L. ROADEN, *Assistant Director and Director of Graduate Studies*

The PERT Project

Dear

During the Spring of 1965, the Cooperative Research Program of the U. S. Office of Education and The Ohio State University sponsored jointly a series of lectures the purpose of which was to disseminate information about a new management information system known as Program Evaluation and Review Technique, or PERT. While the basic purpose of the dissemination lectures was to inform the educational community about the nature of PERT, it was also hoped that the lectures would stimulate the utilization of the technique in various aspects of education. Upon our request, an extension of the original contract was granted for the purpose of conducting a follow-up study to determine the degree of utilization, if any, between the time of the lectures and the present time.

According to our records, you were in attendance at one of the dissemination lectures We are therefore seeking your assistance in this evaluation by completing the enclosed questionnaire. The content of the questionnaire is designed to determine what actions you have taken subsequent to the lectures to learn more about PERT and/or to utilize PERT in educational activities Would you please complete the questionnaire as soon as possible and return it in the stamped, self-addressed envelope provided?

Your cooperation in helping the PERT Project staff in this evaluation is deeply appreciated If you have any suggestions, comments, or experiences on the utilization of PERT in educational activities, we would be more than happy to hear from you

Sincerely yours,

Desmond L. Cook

Desmond L. Cook
Project Director

DLC:jhp

Enclosures: PERT Dissemination Lecture Survey
Return Envelope